

**REMARKS**

This Amendment, submitted in response to the Office Action dated August 26, 2003, is believed to be fully responsive to each point of rejection raised therein. Accordingly, favorable reconsideration on the merits is respectfully requested.

As a preliminary matter, Applicant attaches hereto replacement sheets for the drawing corrections approved in the Office Action.

Claims 1-14 remain pending in the application, including claims 1, 2 and 8 which were previously withdrawn as directed to non-elected subject matter. Claims 1-5, 8, 10 and 11 have been rejected under 35 U.S.C. § 103 as being unpatentable over Lazarev in view of Wilder. Claims 6-7, 9 and 12-14 have been rejected under 35 U.S.C. § 103 as being unpatentable over Lazarev in view of Wilder and further in view of Talmi. Applicant submits the following arguments in traversal of the prior art rejections.

Applicant's invention relates to an imaging apparatus, including an array of pixels in an imaging region for image fluorescence and a non-imaging region. The non-imaging region corresponds to an area where fluorescence is not received. The exemplary embodiment includes an image control device such that when signal charges are to be read, signal charges accumulated in certain pixels falling within a non-image forming area are prevented from being read or are processed at a different reading speed or by a binning operation.

The Examiner continues to maintain that Lazarev teaches imaging and non-imaging areas of a pixel array as described in each independent claim 1-4 and 8. The Examiner also correctly

concedes that Lazarev does not teach an image control device treating image regions differently from non-image regions.

Applicant previously submitted that Wilder determines significant and less significant portions in order to process two types of regions differently. Accordingly, Wilder only teaches imaging control for imaged regions where fluorescence is received, but not imaged regions and non-image regions where fluorescence is not received. In this connection, it was clear that the two regions of Wilder could not be a priori known prior to the image formation, resulting in two image forming regions, rather than the image region and non-image region as claimed by claims 3-4, for example. The Examiner now contends that Lazarev teaches that a region C is a priori known, and that therefore, it would be obvious to exclude those pixels from image forming areas. Detailed Action, page 11, first partial paragraph.

The Examiner's rejection remains unsound. An initial matter, there is no requirement that the purported non-image area, designated by the Examiner as area C, is a priori known. The Examiner only makes that assumption in order to support the rejection. Moreover, the rejection remains inconsistent on its face. At page 11, lines 17-20, the Examiner acknowledges that the Lazarev includes lens 78 for focusing a pair of laterally separated images onto the image pick up, and that the lenses have a variable focus and zoom to accommodate endoscopes of varying f-stops. The Examiner contends that the fluorescence imaging region will have a lateral size defined by the field stop. Thus, at a minimum, the focusing of the endoscope image via lens 78 will create larger or smaller images onto the array. Therefore, the Examiner's contention that the region C is a priori known is incorrect. The region C will not be known until the image becomes focused onto the imaging array. Because the Examiner contends that the lateral size of a circle

region is variable, the region C may encompass more or less area depending on how large the lateral size of the filter areas become. Therefore, contrary to the Examiner's rationale, there can be no a priori knowledge of the non-image area. The control aspects of Wilder, in turn, require imaging of all areas where fluorescence is received and thus does not prevent imaging from non-image regions where no fluorescence is received. Claims 3 and 4 describe such features and are patentable for at least these reasons. Independent claim 1-2 similarly describe disparate treatment based on image and non-image areas. Therefore, claims 1-2 are patentable for similar reasons. Claim 8, describing reading only of an imaging area is patentable for similar reasons.

The Examiner contends that the argument previously of record are based on the references individually, when the rejection is based on the combination. Detailed Action page 10, last partial paragraph. It is submitted that the individual teachings of the references must be considered in order to determine whether the proffered motivation to combine or modify references is proper in the first place. Stated differently, the Examiner cannot ignore the teachings of the references if they teach away from the modification or combination suggested by the Examiner. MPEP 2143.01. In this case, Wilder only permits processing control after a full image becomes processed. In other words, there is no control based on non-image forming areas where no fluorescence is received. The areas of interest in Wilder can only be determined by viewing all aspects of an image where fluorescence is received. If that control were instituted in the primary Lazarev reference, the entire image would still need to be imaged, leaving no non-image areas because neither Wilder nor Lazarev contemplates a priori knowledge of the non-image region. The control mechanism described by each of the independent claims is not taught by the cited combination.

The remaining claims 5-14 are patentable based on their dependency.

With further regard to claim 10, this claim describes prevention of reading based on prestored data. The Examiner contends that Wilder teaches this feature. It is submitted, however, that the random addressing of Wilder only comes into play once overall fluorescence of regions of interest and non-regions of interest (all including fluorescence) are assessed. Therefore, the data is not prestored for non-image areas. Claim 13 is patentable for similar reasons.

With further regard to claim 11, this claim describes a line by line process for preventing image reading. The Examiner cites an addressable memory to teach this aspect of the invention, which does not meet the features of the claim. Claim 14 is patentable for similar reasons.

With further regard to claims 9 and 12, these claims describe that a non-imaging region is covered by an opaque film. The Examiner contends that it would be obvious to form an opaque film over the non-image forming area. To the extent that the Examiner contends that the opaque film should be formed over one of the filter regions (30 or 32) of Lazarev, this rationale is completely without merit, because as previously submitted, both filter regions 30 and 32 are necessary to optimize the image in the primary reference. Equation at col. 8. This only emphasizes the unsoundness in the Examiner's attempt to read a non-image forming area as including regions where an image is actually formed. Therefore, even accepting, for the purposes of argument, the Examiner's contentions with regard to the breadth of independent claims 1-4 have any merit, the continued rationale as applied to claim 9 is without basis. The non-imaging area (including both the filter area (30 or 32) or Lazarev) cannot be covered by an

AMENDMENT UNDER 37 C.F.R. § 1.111  
U.S. Appln. No. 09/777,681

opaque film and still meet the objects of the reference. To the extent that the Examiner contends that region C is covered by an opaque film, this rejection is also unsound because Lazarev does not contemplate fixed boundaries for the region C. As the Examiner recognizes, the lateral size of fields 30, 32 changes. Therefore, covering by an opaque film leads to the possibility that a portion of a necessary area for optimization is omitted from processing. This undermines the operation of the Lazarev reference. Claims 9 and 12 are patentable for at least these additional reasons.

Applicant has added claims 15-22 to describe features of the invention more particularly.

In view of the above, Applicant submits that claims 1-22 are in condition for allowance. Therefore it is respectfully requested that the subject application be passed to issue at the earliest possible time. The Examiner is requested to contact the undersigned at the local telephone number listed below to discuss any other changes deemed necessary.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.


Respectfully submitted,

SUGHRUE MION, PLLC  
Telephone: (202) 293-7060  
Facsimile: (202) 293-7860

WASHINGTON OFFICE

**23373**

CUSTOMER NUMBER

  
Susan Perng Pan  
Registration No. 41,239

Date: January 26, 2004